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A study was made of differences between participants and nonparticipants in rural adult education in British Columbia. Interviews were held with 881 household heads (126 participants, 755 nonparticipants). In general, participants were younger, had a higher standard of living, were more active in formal organizations, had more education, worked in higher prestige occupations, and had higher job earnings, than nonparticipants. Participants and nonparticipants appeared to have markedly different attitudes toward change, although many of the differences observed were accounted for by age and education. When these and other variables were controlled, however, participants were more willing than nonparticipants to give up their spare time to further their education, and they noted a greater need for more education to insure satisfactory employment in the future. To secure wider participation of the rural population in continuing education programs, it would first seem necessary to encourage the development of favorable attitudes toward change. (Nine references and 20 tables are included.) (ly)

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THE INFLUENCE OF EDUCATION AND AGE
ON PARTICIPATION IN RURAL ADULT EDUCATION

SPECIAL STUDY #2

ARDA - Canada Land Inventory Project #49009

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Vancouver
Faculty of Education
University of British Columbia
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CANADA LAND INVENTORY PROJECT #49009

SURVEY REPORTS

- #1 A Socio-Economic Survey of the Prince George Special Sales Area, 1967
- #2 A Socio-Economic Survey of the East Kootenay Area, 1968
- #3 A Socio-Economic Survey of the Pemberton Valley, 1968
- #4 A Socio-Economic Survey of the Peace River Area, 1968
- #5 A Socio-Economic Survey of Fort Nelson, 1968
- #6 A Socio-Economic Survey of the West Kootenay Area, 1968
- #7 A Socio-Economic Survey of the Vanderhoof West Area, 1968

SPECIAL STUDIES

- #1 Rural British Columbia: A Bibliography of Social and Economic Research, 1967
- #2 The Influence of Education and Age on Participation in Rural Adult Education, 1968
- #3 Community Structure and Participation in Adult Education, 1968

PREFACE

The Socio-Economic Sector of the Canada Land Inventory in British Columbia is concerned principally with the description of the population resident on rural land in certain selected areas in the province. In addition to the regular area survey reports, a number of special studies are being made that provide a more detailed analysis of certain characteristics of the rural population in the search for variant data that will further understanding about rural people. The study reported here examines the characteristics of those rural residents who reported some participation in adult education in order to see how they differed from those who did not participate. This report not only extends the analysis of the rural population beyond that appropriate for a survey report but it also expands knowledge about participation in adult education by examining the influence of age and educational attainment on such participation. In this way it provides clues that may be useful in planning for rural development programs.

The special studies derived from the original survey data are not intended to do more than enlarge the body of knowledge about Canadian rural life. The data presented and the conclusions reached are not assumed to be characteristic of rural populations beyond those actually studied, therefore, any applications of this research to other rural communities beyond British Columbia must be approached cautiously. Even with this stricture in mind, the analysis reported here is useful in enlarging our understanding of the factors influencing the participation of adults in educational activities so that the research does have relevance beyond the immediate population studied by examining a special aspect of a general phenomenon.

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CHAPTER ONE

THE STUDY

The success of many rural development programs depends upon the diffusion of knowledge to those adults affected by the program. Attempts have been made to disseminate information through the mass media and this may be successful in bringing about the desired behavioral changes, however, it is difficult to reach a specific group by such means and any learning that does occur is largely by chance. The systematic diffusion of knowledge, on the other hand, involves the use of specially planned settings for learning in order to increase the probability of behavioral change.¹

A program designed for the systematic diffusion of knowledge can be successful only if it engages the participation of members of the group for which it was planned. As participation in such programs of adult education is voluntary, certain segments of the target population may not be reached and therefore the program fails. At the present time it is difficult to predict who will participate and who will not as little is known about the dynamics of participation. As a result, adult educators have had only limited success in

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1. Coolie Verner, A Conceptual Scheme for the Identification and Classification of Processes for Adult Education. Chicago: Adult Education Association, 1962, pp. 1-2.

planning educational programs for rural adults or in altering their pre-existing patterns of participation. There is a need, therefore, for research that would help to explain the phenomenon of participation so that programs of rural development will be of maximum benefit. The purpose of this study is to examine a number of variables that may be related to participation in adult education in rural British Columbia.

THEORETICAL BACKGROUND

One reason for the lack of knowledge regarding participation in adult education is that no theories have been fully developed yet that will enable the explanation or prediction of the phenomenon. A number of variables have been examined, but not within a consistent theoretical framework. The content of a valid participation theory must include three categories of variables: the many forms of adult education programs, the varied cultural settings in which adult education occurs, and the many relevant characteristics of individuals. The emphasis in this study is on the latter category of characteristics as the cultural setting, that of rural British Columbia, remains constant and most of the adult education programs available in this setting are those offered in classes sponsored by local night schools.

Participation in Adult Education

The decision to participate or not in an adult education program is made by an individual, therefore, a valid approach to theory would be to analyze participation from an individual point of view rather than from that of the community or institution offering the program. While research conducted from the latter viewpoints is useful to program planners and administrators, it does not explain individual decisions regarding participation. The participation of an individual can be considered either at one point in time or over an extended

period and it can be measured either in terms of a participant-non-participant dichotomy or by the total number of participations. In this study the dependent variable, participation in adult education, was measured by the response to the question, "Have you taken any adult education courses in the last three years?" Those who replied "yes" were classified as participants and those who responded "no" were classified as non-participants.

Individual Characteristics

Many characteristics of individuals have been studied to test their relationship to participation in adult education. These have been classified by Douglass and Moss² into two general types: positional factors are concerned with the positions a person occupies in the social structure, while psychological factors are those which may influence the manner in which the roles associated with the various positions are performed. Most of the extant research pertaining to participation in adult education deals with positional factors³ but psychological factors have rarely been studied.

Several trends may be noted in studies of positional factors. Participation in adult education tends to decrease with age and to increase among those with higher educational achievement. Both a higher level of income and of occupation are indicative of greater participation in adult education. Sixteen

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2. Mohammad Douglass and Gwenna Moss, "Differential Participation Patterns of Adults of Low and High Educational Attainment," Adult Education, 18:247-259, (Summer, 1968).
 3. Among the studies dealing with positional factors are the following: Dominion Bureau of Statistics, Participants in Further Education in Canada, Ottawa: Queen's Printer, 1963; John W.C. Johnstone and Ramone J. Rivera, Volunteers for Learning, Chicago: Aldine Publishing Company, 1965; Jack London, Robert Wenkert, and Warren O. Hagstrom, Adult Education and Social Class, Berkeley: University of California Survey Research Center, 1963. A number of studies are reviewed in: E. de S. Brunner, et. al., An Overview of Adult Education Research, Chicago: Adult Education Association, 1959; Alan B. Knox, "Clientele Analysis," Review of Educational Research, 35:231-239, (June, 1965); Coolie Verner and John S. Newberry, Jr., "The Nature of Adult Participation," Adult Education, 8:208-222, (Summer, 1958).

positional variables were investigated in this study and these were classified into four categories including personal, social, educational, and economic characteristics. The personal characteristics included marital status, age, and number of years resident in the area and the social characteristics were distance travelled for essential goods and services, level of living, and social participation. Five educational characteristics included years of school completed by the respondent, his wife, and his father, the educational achievement of children who had left school, and the job training received. Five characteristics were classified as economic including farm or non-farm occupation, the socio-economic status of the principal occupation, job satisfaction, number of years in the present occupation, and total family income.

Research relating psychological factors to participation in adult education has been rarely undertaken as these variables are difficult to isolate and study. Such factors as interests, attitudes, and values are not readily observable nor do they lend themselves to measurement with the same facility as age, education, or income. Friedmann⁴ has suggested that one important psychological variable is value compatibility and that participation in adult education will vary according to the degree of compatibility which exists between the value orientations of the programs and those of the individual. With a high degree of compatibility, participation would be high whereas it would be low if there was little compatibility of values between the program and the individual.

As adult education is concerned with learning, and learning implies change, it would be expected that participants in adult education would be more positively oriented toward change than non-participants. The two positional factors of age and education might influence this relationship. Favourable attitudes usually result from successful experiences, therefore, those who had greater educational achievement would probably have more favourable attitudes

4. E.A. Friedmann, "Changing Value Orientations in Adult Life," Hobert W. Burns, ed. Sociological Backgrounds of Adult Education, Chicago: Center for the study of Liberal Education for Adults, 1964, p. 44.

toward education and would thus be more likely to participate than those with less formal schooling. A general trend toward conservatism and of severing ties with the outside world occurs with advancing age⁵ and this would suggest that attitudes toward change would become less favourable. Attitudes toward change were measured in this study by a series of items dealing with feelings toward changes in residence and occupation and toward continuing education. The influence of the variables age and education were controlled by selecting a matched sample of participants and non-participants in adult education.

SAMPLING

The initial stage of the sampling procedure used in this study involved the purposive selection of five widely-scattered rural areas in British Columbia which were chosen in connection with an ARDA Socio-Economic Survey.⁶ Privately owned or leased land plots were selected randomly within each survey area and a structured interview was sought with each household head resident on the chosen lots.⁷ Interviews were completed with 881 household heads in the summer of 1967.

One hundred twenty-six respondents (14.3 per cent) in that sample were classified as participants in adult education for purposes of this study,⁸

5. Robert J. Havighurst, "Changing Status and Roles during the Adult Life Cycle: Significance for Adult Education," Burns, op. cit., pp. 17-38.

6. The five areas included Peace River, Fort Nelson, West Kootenay, Vanderhoof West, and Kamloops. A separate survey report on each area has been or will be prepared.

7. Copies of the interview schedule are available from the Department of Adult Education, University of British Columbia. This stage of the sampling procedure is reported in detail in: Coolie Verner, Planning and Conducting a Survey: A Case Study, Ottawa: Rural Development Branch, Department of Forestry and Rural Development, 1967.

8. Dean S. Goard, "Analysis of Participants in Rural Adult Education," Unpublished M.A. Thesis, University of British Columbia, 1968.

and a like number of non-participants was selected from the remaining 755 interview schedules using a table of random numbers.⁹ A second sample of non-participants was then drawn, but this group was matched with the participants with respect to age and education. This procedure removed the influence of those two variables and a third, sex of the respondent, was automatically controlled as most of the household heads interviewed were male. Four of the participants could not be matched with non-participants and this reduced the number in each group to 122.

The age and educational distribution of the matched sample is shown in Table 1. Nearly two-thirds of each group had eleven or less years of schooling while the remainder had twelve or more years of school completed. Approximately sixty per cent were less than 45 years of age and the others were older than 45 years with 14.8 per cent in the 55 years or more category.

TABLE 1
PERCENTAGE DISTRIBUTION OF THE MATCHED SAMPLE
BY AGE AND YEARS OF SCHOOL COMPLETED

Age	Years of school completed					
	11 or less		12 or more		Total	
	No.	%	No.	%	No.	%
Less than 35	23	29.5	14	31.8	37	30.3
35 - 44	25	32.0	13	29.6	38	31.1
45 - 54	18	23.1	11	25.0	29	23.8
55 or more	12	15.4	6	13.6	18	14.8
Total	78	100.0	44	100.0	122	100.0

9. M.G. Kendall and B. Babington Smith, Tables of Random Sampling Numbers, London: Cambridge University Press, 1951.

DATA ANALYSIS

Most of the data reported here are those comparing the participants in adult education with the random sample of non-participants. Bivariate tabulations were prepared and tested for significant differences using the chi square statistic.¹⁰ Where the data were not amenable to that test, a test for the significance of the difference between percentages was used.¹¹ Whenever a characteristic differentiated between the participants and the random sample of non-participants, the matched sample was examined to test the influence of that variable on participation with the interaction effects of age and education controlled. Analysis of variance was used to test for statistically significant differences between the two groups with respect to the mean scores of the age and education blocks and the F ratios obtained were tested at both the .05 and the .01 level of significance.¹²

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10. A.L. Edwards, Statistical Methods for the Behavioral Sciences, New York: Holt, Rinehart and Winston, 1966, pp. 366-398.
 11. Vernon Davies, A Rapid Method for Determining the Significance of the Difference between Two Percentages. Pullman, Washington: the author, no date.
 12. F.N. Kerlinger, Foundations of Behavioral Research, New York: Holt, Rinehart and Winston, 1967, pp. 242-249.

CHAPTER TWO

CHARACTERISTICS OF PARTICIPANTS

A number of positional factors have been found to differentiate between participants and non-participants in adult education by previous research. Data respecting certain of these characteristics were collected from each respondent in the survey and are used here to compare the two groups. Although many of the characteristics studied differentiated between participants and non-participants, variations in age and education accounted for many of the differences observed.

A summary of the significant characteristics resulting from the comparison of the participants with the random sample of non-participants is presented in Table 2. The chi square statistic yielded no significant differences at the .05 level in the distribution between the two groups by any of the personal characteristics, but social participation and level of living in the social characteristics category differentiated between participants and non-participants. Four out of five educational variables were associated with participation, the only exception being years of school completed by the father. Only one economic characteristic, job satisfaction, did not differentiate between participants and non-participants.

TABLE 2
CHI SQUARE VALUES FOR DISTRIBUTIONS
BY POSITIONAL FACTORS BETWEEN
PARTICIPANTS AND NON-PARTICIPANTS

Factor	Chi Square	Degrees of Freedom	P
Personal:			
Marital status	0.34	2	> .05
Age	5.80	3	> .05
Years in area	4.28	2	> .05
Social:			
Distance travelled	4.67	2	> .05
Level of Living	23.32	3	< .001
Social participation	17.12	3	< .001
Educational:			
Years of schooling	39.20	5	< .001
Schooling of wife	14.34	4	< .01
Education of children	49.14	1	< .001
Schooling of father	0.86	2	> .05
Job training	n.a.	n.a.	n.a.
Economic:			
Farm - Non-farm	12.68	2	< .01
Principal occupation	28.96	4	< .001
Job satisfaction	3.38	2	> .05
Years in occupation	11.54	5	< .05
Total income	14.04	3	< .01

PERSONAL CHARACTERISTICS

Most of the participants and non-participants were married with 13.4 per cent of the former and 11.2 per cent of the latter group being either single or widowed, divorced, or separated from their wives. The difference in the age distribution between the two groups was not statistically significant although the median age category for participants was 35 to 44 years compared with a median of 45 to 54 years for non-participants. Some sixty per cent of the participants were less than 45 years of age and 2.4 per cent were 65 years or more. In the random sample of non-participants, 46.8 per cent were less than 45 years of age while 11.1 per cent were over 65. (Table 3). A t-test was computed in order to compare the mean age of the participants (42.4 years) with that of the non-participants (46.4 years) and the difference between the two groups was statistically significant at the .05 level. Thus, there was some evidence to indicate that the participants in continuing education were younger than the non-participants and this is consistent with the findings of other studies.¹ While younger rural residents were more likely to participate

TABLE 3
AGE DISTRIBUTION OF PARTICIPANTS AND NON-PARTICIPANTS

Age	Total		Non-participants		Participants	
	No.	%	No.	%	No.	%
Less than 35	66	26.2	28	22.2	38	30.2
35 - 44	69	27.4*	31	24.6	38	30.2*
45 - 54	66	26.2	35	27.8*	31	24.6
55 - 64	34	13.5	18	14.3	16	12.7
65 or more	17	6.7	14	11.1	3	2.4
Total	252	100.0	126	100.0	126	100.0

* Median $X^2 = 5.80$, d.f. = 4, $p > .05$.

1. See for example: Brunner, op. cit., p. 105; London, op. cit., p. 43; Verner and Newberry, op. cit., p. 215.

in continuing education programs, advanced age was not a complete barrier to participation.

Allied to the age variable is that of number of years resident in the present community and there was a significant positive correlation ($r = .28$) between the two characteristics. As the participants were somewhat younger than the non-participants, it could be expected that the participants would have lived fewer years in the area. Some 36.6 per cent of the participants had been in their present community for five years or less and 29.4 per cent for longer than twenty years while 25.4 per cent of the non-participants were relative newcomers and 44.4 per cent had been in the present community for more than twenty years. The difference in the distribution by number of years resident in the area between participants and non-participants was not statistically significant.

The data respecting age and number of years resident in the area points to a group of people among which involvement in continuing education programs could be improved. The needs of the older rural residents appear not to be met by existing adult education agencies, therefore, new programs and methods would be necessary in order to reach these people more effectively.

SOCIAL CHARACTERISTICS

The participation of rural residents in the social life of their community is usually influenced by their degree of physical isolation,² thus, the number of contacts with a service center tend to decrease with distance. Since most programs of adult education are offered in service centers, it might be expected that participation in continuing education would decrease with distance. Such was not the case here as there was no statistically significant difference in the distribution by distance travelled between participants and non-participants.

2. See for example: A.H. Hawley, Human Ecology, New York: Ronald Press, 1950, p. 255. See also: M. Taylor Mathews, Experience-Worlds of Mountain People, New York: Columbia University Teachers College, 1937.

The median distance travelled for goods and services was in the six to ten mile class for both groups and some sixteen per cent travelled more than twenty-five miles. Distance as such did not appear to prohibit participation in adult education by rural residents although it was not possible to ascertain what effect the location of programs outside of the service centers would have on participation.

Sewell's Farm Family Socio-Economic Status Scale³ was used to assess the level of living of the participants and the non-participants. There was a statistically significant difference in the distribution by level of living score between the two groups with the participants having the higher scores. One-fourth of that group as against 9.5 per cent of the non-participants had more than ninety points whereas 17.5 per cent of the participants compared with 41.3 per cent of the non-participants received less than eighty points. (Table 4). Analysis of variance for the matched sample of participants and non-participants did not produce any significant differences among the age and education blocks which suggest that the variations observed in the random sample were attributable to the characteristics age and education. Nevertheless, the data support the tendency noted in previous research for those with a higher socio-economic status to participate more in continuing education than those of lower socio-economic status.⁴

The involvement of respondents in formal community organizations was measured with Chapin's Social Participation Scale.⁵ The difference in the

3. W.H. Sewell, "A Short Form of the Farm Family Socio-Economic Status Scale", Rural Sociology, 8:161-170, (June, 1943).

4. Verner and Newberry, op. cit.

5. F.S. Chapin, Social Participation Scale, Minneapolis: University of Minnesota Press, 1938. The extent of participation is measured by the number of memberships held during the previous year and each membership counts as one point toward the total scale score. Intensity of involvement is measured by attendance at meetings, financial contributions, committee memberships, and the holding of offices. A higher scale score reflects a higher rate of participation.

distribution by social participation score between the participants and non-participants in adult education was statistically significant. As is shown in Table 5, 51.6 per cent of those who did not participate in adult education were non-participants with respect to community organizations whereas 34.9 per cent of the participants in continuing education did not participate in a formal organization. Some 42.9 per cent of the participants in adult education had a social participation score of more than eleven points while the corresponding figure for non-participants was 19.8 per cent. These findings were not unexpected as participation in one type of activity is usually related to participation in other activities.

TABLE 4
PERCENTAGE DISTRIBUTION OF PARTICIPANTS AND NON-PARTICIPANTS
BY LEVEL OF LIVING SCORE

Score.	Total		Non-participants		Participants	
	No.	%	No.	%	No.	%
70 or less	21	8.3	17	13.5	4	3.2
71 - 80	53	21.0	35	27.8	18	14.3
81 - 90	134	53.2*	62	49.2*	72	57.1*
More than 90	44	17.5	12	9.5	32	25.4
Total	252	100.0	126	100.0	126	100.0

* Median $X^2 = 23.32$, d.f. = 3, $p < .001$.

An analysis of variance of the matched sample of participants and non-participants revealed that the former group reported more social participation than the latter in every age and education category except one. (Table 6). Also with one exception, the respondents in each age group who had more education reported higher social participation scores than members of the same age group with less education. These data indicate that the relationship between participation in two types of activities persisted when the influence of

TABLE 5
PERCENTAGE DISTRIBUTION OF PARTICIPANTS AND NON-PARTICIPANTS
BY SOCIAL PARTICIPATION SCORE

Score	Total		Non-participants		Participants	
	No.	%	No.	%	No.	%
0	109	43.2	65	51.6*	44	34.9
1 - 10	64	25.4*	36	28.6	28	22.2*
11 - 20	39	15.5	15	11.9	24	19.0
More than 20	40	15.9	10	7.9	30	23.9
Total	252	100.0	126	100.0	126	100.0

* Median $X^2 = 17.12$, d.f. = 3, $p < .001$.

the age and education variables was removed. It appears necessary to devise some new methods of communicating with the non-participants in adult education especially those with less formal education, as the existing channels of community organizations would not seem to be an effective means of reaching them. There might be some success in reaching the better educated non-participants in adult education through the existing formal organizational structures.

EDUCATIONAL CHARACTERISTICS

The most consistent finding in studies of participation in adult education is a strong association between level of formal education and participation.⁶ Several educational variables were investigated in this study and the findings were generally consistent with those of previous research.

With respect to the educational achievement of the household heads, there was a statistically significant difference in the distribution by years of

6. Johnstone and Rivera, op. cit., p. 7; Verner and Newberry, op. cit., p. 218

TABLE 6
MEAN SOCIAL PARTICIPATION SCORES OF THE MATCHED SAMPLE OF
PARTICIPANTS AND NON-PARTICIPANTS IN ADULT EDUCATION

Age	Years of Schooling	Participants	Non-Participants
34 or less	11 or less	2.13	2.43
	12 or more	3.50	2.57
35 - 44	11 or less	3.36	2.60
	12 or more	4.23	3.61
45 - 54	11 or less	3.77	2.94
	12 or more	3.63	3.09
55 or more	11 or less	3.58	2.08
	12 or more	5.33	4.00

Total Variance = 10.22

Between Column Variance = 2.40 $F = 35.77$ Significant at the .01 level.

Between Row Variance = 7.35 $F = 15.61$ Significant at the .01 level.

Residual Variance = .47

school completed between participants and non-participants. The median schooling reported by the participants was in the nine to eleven year class with one functional illiterate and 38.1 per cent had twelve or more years of schooling. On the other hand, the median years of school completed by the non-participants was eight years and seventeen (13.5 per cent) were functionally illiterate while 12.7 per cent had twelve or more years of schooling. (Table 7). There was, therefore, a higher level of formal schooling among the participants in adult education than was found in the non-participant group. As years of school completed was one of the variables on which the matched sample was selected, an analysis of variance was not computed for that characteristic.

The years of school completed by the wives of respondents also differentiated between the participants and non-participants in adult education. As

TABLE 7
PERCENTAGE DISTRIBUTION OF PARTICIPANTS AND NON-PARTICIPANTS
BY YEARS OF SCHOOL COMPLETED

Years of Schooling	Total		Non-participants		Participants	
	No.	%	No.	%	No.	%
5 or less	18	7.1	17	13.5	1	0.8
6 - 7	33	13.1	19	15.1	14	11.1
8	67	26.6	42	33.3*	25	19.8
9 - 11	70	27.8*	32	25.4	38	30.2*
12	42	16.7	14	11.1	28	22.2
13 or more	22	8.7	2	1.6	20	15.9
Total	252	100.0	126	100.0	126	100.0

* Median $\chi^2 = 39.20$, d.f. = 5, $p < .001$.

is indicated in Table 8, 17.5 per cent of the wives of participants had eight or less years of schooling and 35.7 per cent had twelve or more years. Among the non-participants, 36.5 per cent of the wives had eight or less years of school completed while 27.7 per cent had twelve or more years. An analysis of variance for this characteristic did not produce any statistically significant differences, thus, variations related to the education of the wife in the participant and non-participant groups were a reflection of those found among the husbands. This was not unexpected as socio-economic surveys of the rural population in the province indicate that marriage partners tend to be chosen from among those with a similar educational background.⁷ As the participants reported more education than the non-participants, it would follow that the two groups of wives would be similarly related.

7. See for example: Survey Reports 2 and 3.

TABLE 8
PERCENTAGE DISTRIBUTION OF PARTICIPANTS AND NON-PARTICIPANTS
BY YEARS OF SCHOOL COMPLETED BY THE WIFE

Years of Schooling	Total		Non-participants		Participants	
	No.	%	No.	%	No.	%
5 or less	10	4.0	8	6.4	2	1.6
6 - 7	20	7.9	12	9.5	8	6.4
8	38	15.1	26	20.6	12	9.5
9 - 11	76	30.2*	29	23.0*	47	37.3*
12	52	20.6	24	19.0	28	22.2
13 or more	28	11.1	11	8.7	17	13.5
No response	28	11.1	16	12.7	12	9.5
Total	252	100.0	126	100.0	126	100.0

* Median $X^2 = 14.34$, d.f. = 4, $p < .01$.

The greater educational achievement of the participants in adult education was reflected in the educational standing of their children. As is noted in Table 9, two-thirds of the children of participants who had left school did so after completing Grade Twelve whereas only one-third of the children of non-participants had completed high school.⁸ These data suggest that a higher educational achievement by the respondent coupled with participation in continuing education is indicative of a much greater probability of educational success by the children than where the father had less education and did not participate in adult education.

Adult education therefore seems to be contributing toward widening the educational gap between families with high and low formal schooling. This process seems to be occurring only with respect to the respondents and their children. Information was sought respecting the educational achievement of a third generation, the fathers of respondents, but there was no statistically significant difference in the distribution by years of school completed by the father between participants and non-participants.

8. An analysis of variance was not computed for this characteristic because few children who had finished their schooling were reported by respondents in the younger age categories.

TABLE 9
PERCENTAGE DISTRIBUTION OF CHILDREN WHO HAD LEFT SCHOOL
BY EDUCATIONAL STANDING

Education	Total		Non-participants		Participants	
	No.	%	No.	%	No.	%
Completed Grade Twelve	95	42.8	47	31.3	48	66.7
Didn't complete Grade Twelve	127	57.2	103	68.7	24	33.3
Total	222	100.0	150	100.0	72	100.0

$$X^2 = 49.14, \text{ d.f.} = 1, p < .001.$$

After they had completed their formal schooling, a number of respondents, wives, and fathers had taken a job training program. As is indicated in Table 10, 56.4 per cent of the participants as against 31.0 per cent of the non-participants reported job training and the difference between the two percentages was statistically significant. Similarly, more of the wives and the fathers of participants than of non-participants had received job training. These data further emphasize the educational discrepancy between those who participate in continuing education and those who do not. This intensifies the need for finding new ways of involving the non-participants in educational and developmental programs so that their educational disadvantage will not become so overwhelming as to force them into a sub-marginal economic position.

ECONOMIC CHARACTERISTICS

Of the total number of respondents 31.3 per cent were engaged in agriculture while 63.5 per cent reported non-farming occupations and the remainder had no job. There was a statistically significant difference in the distribution by nature of the occupation between the participants and the non-participants in continuing education. Some 25.4 per cent of the participants

TABLE 10
PERCENTAGE DISTRIBUTION OF PARTICIPANTS AND NON-PARTICIPANTS
BY JOB TRAINING OF RESPONDENTS, WIVES, AND FATHERS

Training	Non- Participants (N = 126)		Participants (N = 126)		Difference Between Percentages	Significance of Difference (p)
	No.	%	No.	%		
Respondents	39	31.0	71	56.4	25.4	< .01
Wives	28	25.4	47	41.6	16.2	< .02
Fathers	22	17.6	39	31.1	13.5	< .02

compared with 37.3 per cent of the non-participants were classified as farmers whereas non-farm occupations were reported by 73.0 per cent of the participants and 54.0 per cent of the non-participants. (Table 11). The rural farm household heads were therefore less likely to participate than the non-farm and this was not unexpected since this is the case in Canada generally.⁹ This finding does suggest, however, that it might be more difficult to involve rural farm residents in continuing education programs.

The Blishen Occupational Class Scale¹⁰ was used to rate the principal occupations of the respondents and the findings indicated that participants in adult education generally reported occupations of higher status than did the non-participants. Some 29.4 per cent of the participants as against 9.5 per cent of the non-participants had occupations rated as Class 1 or 2 whereas 40.5 per cent of the non-participants compared with 19.0 per cent of the participants

9. Dominion Bureau of Statistics, *op. cit.*, pp. 12-16.

10. This scale ranks occupations on the basis of combined standard scores for income and years of schooling using data from the 1951 Census of Canada. The occupational ranks range from Class 1 (judges, dentists, physicians) to Class 7 (labourers, fishermen, trappers). See: Bernard R. Blishen, "The Construction and Use of an Occupational Class Scale," *Canadian Journal of Economics and Political Science*, 24:519-531, (November, 1958).

TABLE 11
PERCENTAGE DISTRIBUTION OF PARTICIPANTS AND NON-PARTICIPANTS
BY RELATIONSHIP TO AGRICULTURE

Relationship	Total		Non-participants		Participants	
	No.	%	No.	%	No.	%
Farm	79	31.3	47	37.3	32	25.4
Non-farm	160	63.5	68	54.0	92	73.0
No job	13	5.2	11	8.7	2	1.6
Total	252	100.0	126	100.0	126	100.0

$$X^2 = 12.68, \text{ d.f.} = 2, p < .01.$$

reported Class 6 or 7 occupations. (Table 12). These findings were not unexpected as several studies have noted a relationship between occupational prestige and participation in adult education.¹¹

TABLE 12
PERCENTAGE DISTRIBUTION OF PARTICIPANTS AND NON-PARTICIPANTS
BY BLISHEN RATING OF PRINCIPAL OCCUPATION

Rating	Total		Non-participants		Participants	
	No.	%	No.	%	No.	%
1	5	2.0	1	0.8	4	3.2
2	44	17.5	11	8.7	33	26.2
3	11	4.4	3	2.4	8	6.3
4	8	3.2	1	0.8	7	5.6
5	96	38.1*	48	38.1*	48	38.1*
6	43	17.1	29	23.0	14	11.1
7	32	12.7	22	17.5	10	7.9
No job	13	5.1	11	8.7	2	1.6
Total	252	100.0	126	100.0	126	100.0

* Median $X^2 = 28.96, \text{ d.f.} = 4, p < .001.$

11. Brunner, op. cit., p. 96.

An analysis of variance of the data presented in Table 13 indicated that differences between participants and non-participants with respect to prestige of the principal occupation were not solely attributable to the characteristics age and education. The jobs reported by the participants had more prestige than those of the non-participants in all of the age and education categories. Within each age group, those with more education reported jobs with higher prestige than did those with less education. These data suggest that formal schooling influenced the type of job obtained by the respondents, but those who participated in continuing education had advanced to higher status jobs than did the non-participants. Participation in adult education among the rural residents appeared to be vocationally oriented in most cases and was used to prepare for job advancement.

TABLE 13
MEAN OCCUPATIONAL PRESTIGE SCORES OF THE MATCHED SAMPLE
OF PARTICIPANTS AND NON-PARTICIPANTS IN ADULT EDUCATION

Age	Years of Schooling	Participants	Non-Participants
34 or less	11 or less	4.52	5.17
	12 or more	3.85	4.42
35 - 44	11 or less	4.96	5.52
	12 or more	3.41	4.23
45 - 54	11 or less	4.61	4.88
	12 or more	3.18	4.00
55 or more	11 or less	4.44	4.91
	12 or more	2.50	2.66

Total Variance = 11.64

Between Column Variance = 1.16

F = 50.80 Significant at the .01 level

Between Row Variance = 10.32

F = 74.50 Significant at the .01 level

Residual (C X R) = .16

A revised form of the Brayfield and Rothe Index of Job Satisfaction¹² was used to measure the job satisfaction of the respondents but there was no statistically significant difference in the distribution by total scale score between the participants and the non-participants. The number of years that the respondent had worked in his present occupation did distinguish between the two groups. As is indicated in Table 14, the non-participants were mainly in the two categories of less than five years or more than twenty years in the present occupation whereas more of the participants were in the middle categories. These findings coupled with those respecting occupational prestige

TABLE 14
PERCENTAGE DISTRIBUTION OF PARTICIPANTS AND NON-PARTICIPANTS
BY NUMBER OF YEARS IN THE PRESENT OCCUPATION

Years	Total		Non-participants		Participants	
	No.	%	No.	%	No.	%
2 or less	44	17.5	23	18.3	21	16.7
3 - 5	42	16.7	24	19.0	17	13.5
6 - 10	51	20.3*	17	13.5*	35	27.8*
11 - 15	29	11.5	12	9.5	17	13.5
16 - 20	24	9.5	9	7.1	15	11.9
More than 20	49	19.4	30	23.8	19	15.0
No job	13	5.1	11	8.7	2	1.6
Total	252	100.0	126	100.0	126	100.0

* Median $X^2 = 11.54$, d.f. = 5, $p < .05$.

would appear to indicate that after several years in an occupation, some respondents used continuing education to upgrade their job skills and move into occupations with more status. When the influence of the variables age and

12. A.H. Brayfield and H.F. Rothe, "An Index of Job Satisfaction." *Journal of Applied Psychology*, 35:307-311, (October, 1951). That scale consists of eighteen statements but it was reduced to nine for this study by eliminating the half-step items.

education was removed, however, the relationship between number of years in the present occupation and participation in adult education disappeared.

The amount of income received from the principal job differentiated between the participants and the non-participants with the latter group reporting lower earnings. Some 16.7 per cent of the participants as against 34.9 per cent of the non-participants received less than \$3,000 per year while 38.1 per cent of the participants compared with 21.5 per cent of the non-participants earned more than \$6,000. (Table 15). The difference between the two groups appeared to be accounted for by the characteristics age and education as an analysis of variance did not yield any significant values.

TABLE 15
PERCENTAGE DISTRIBUTION OF PARTICIPANTS AND NON-PARTICIPANTS
BY INCOME RECEIVED FROM THE PRINCIPAL JOB.

Income	Total Non-participants		Participants	
	No.	%	No.	%
Less than \$3,000	65	25.8	44	34.9
3,000 - 5,999	103	40.9*	52	41.3*
6,000 - 8,999	59	23.4	21	16.7
9,000 or more	16	6.3	6	4.8
No response	9	3.6	3	2.4
Total	252	100.0	126	100.0

* Median $X^2 = 14.04$, d.f. = 3, $p < .01$.

SUMMARY

A number of positional factors discussed in this chapter differentiated between participants and non-participants in continuing education programs. The participants were younger, had a higher level of living, were more active in formal organizations, had a better educational background, worked in

occupations with more prestige, and had higher job earnings than did the non-participants. When the interacting effects of age and education were removed only social participation and the prestige of the principal occupation were clearly related to participation in adult education. It was thus possible to identify the characteristics of those who would be more and less likely to participate but most of these variables were overshadowed by differences in age and education.

CHAPTER THREE

ATTITUDES TOWARD CHANGE

There is a paucity of research pertaining to the attitudes of participants and non-participants in continuing education programs. The description of positional factors assists in identifying those who would be most or least likely to participate, but it is not particularly suggestive of methods of encouraging participation among those who are not normally involved in educational programs. A more fruitful approach to the problem may be to study the present attitudes of participants and non-participants so that those of the latter group may be altered in order to increase the probability of their participation.

In order to test the hypothesis that participants in adult education have more favourable attitudes toward change than do non-participants, eight attitude items were administered to the respondents.¹ As attitudes toward change might be influenced by age and education, an analysis of variance was computed for each attitude item in the same manner as for each positional factor reported previously.

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1. The Likert scoring procedure of five responses ranging from "strongly agree" to "strongly disagree" was used in obtaining the data. In subsequent scaling procedures the responses were analyzed as dichotomies of either "favourable" or "unfavourable" attitudes toward change.

ATTITUDES TOWARD CHANGE OF JOB OR RESIDENCE

Three attitude items dealt with changes in the present occupation or the area of residence. Most of the respondents were willing to leave the area if circumstances necessitated such a move and the difference between the percentage of participants and non-participants with a favourable attitude toward this item was not statistically significant. (Table 16). The respondents were more reluctant to leave the area in order to make an advance in their occupation, but the participants in adult education were more flexible in that respect than were the non-participants. Some 57.1 per cent of the former group as against 34.9 per cent of the latter group expressed a favourable attitude toward changing the area of residence for job reasons and the difference between the two percentages was statistically significant. The

TABLE 16
PERCENTAGE DISTRIBUTION OF PARTICIPANTS AND NON-PARTICIPANTS
GIVING A FAVOURABLE RESPONSE TO CHANGE ITEMS CONCERNING
THE JOB AND THE AREA

Item	Percentage Giving Favourable Response		Difference Between Percentages	Significance of Difference (p)
	Participants (N = 126)	Non-Participants (N = 126)		
"I would not mind leaving here in order to make a substantial advance in my occupation."	57.1	34.9	22.2	< .01
"I do not want any new job which involves more responsibility."	71.4	54.0	17.4	< .01
"I would not leave this area under any circumstances."	81.0	73.8	7.2	> .05

participants in adult education were also more willing to take on a new job which involved more responsibility and 71.4 per cent of that group made a favourable response to the item compared with 54.0 per cent of the non-participants.

These data suggest that the participants might be somewhat more flexible than the non-participants with respect to changes in the present job or residence, but the analysis of variance for each item indicated that most of the differences observed between the two groups were accounted for by the characteristics age and education. As age increased, the attitude toward each change item became less favourable while the attitudes became more favourable as education increased, regardless of whether or not the individuals participated in continuing education programs.

ATTITUDES TOWARD LEARNING

The five items listed in Table 17 were concerned with attitudes toward changes involving learning and in each case, there was a statistically significant difference between the percentage of participants and non-participants expressing a favourable attitude. Some 77.0 per cent of the participants as against 51.6 per cent of the non-participants said that they would not find it very difficult to go to school to learn new skills. Only about ten per cent of the participants indicated that learning a new routine would be difficult for them whereas more than one-third of the non-participants reported this. Half of the participants and one-third of the non-participants had a favourable attitude toward learning a new trade. For the above three items the analysis of variance did not produce any statistically significant values, therefore, the differences observed between the participants and the non-participants were explained by the variables age and education.

Such was not the case for the remaining two items. The largest percentage difference of any attitude statement was for that concerning willingness

TABLE 17
 PERCENTAGE DISTRIBUTION OF PARTICIPANTS AND NON-PARTICIPANTS
 GIVING A FAVOURABLE RESPONSE TO CHANGE ITEMS
 CONCERNING LEARNING

Item	Percentages Giving Favourable Response		Difference Between Percentages	Significance of Difference (p)
	Participants (N = 126)	Non-Participants (N = 126)		
"I would be willing to give up my spare time to further my education."	79.4	52.4	27.0	< .01
"I would find it very difficult to go to school to learn new skills."	77.0	51.6	25.4	< .01
"Learning a new routine would be very difficult for me."	89.7	65.9	23.8	< .01
"I will need further education to ensure myself adequate employment in the future."	42.1	21.4	20.7	< .01
"I have no desire to learn a new trade."	50.8	34.1	16.7	< .01

to give up spare time for further education and 79.4 per cent of the participants as against 52.4 per cent of the non-participants said that they would do this. In the analysis of variance using five response categories, every age and education group of participants was more willing than its matched group of non-participants to give up spare time for further education and the difference between the two groups became greater as age increased. (Table 18). The block with the highest average score and therefore the most favourable attitudes was that of participants aged 45 to 54 years with twelve or more years of schooling while the lowest average score was that of non-participants over 55 years of age with eleven or less

years of school completed. In three of the four age groups of participants, those with less formal schooling were more willing than those with more schooling to give up their spare time for further education and this also occurred in two of the four age groups of non-participants.

TABLE 18

MEAN SCORES OF THE MATCHED SAMPLE OF PARTICIPANTS AND NON-PARTICIPANTS IN ADULT EDUCATION: WILLINGNESS TO GIVE UP SPARETIME FOR FURTHER EDUCATION

Age	Years of Schooling	Participants	Non-Participants
34 or less	11 or less	3.78	3.74
	12 or more	3.64	3.50
35 - 44	11 or less	3.84	3.40
	12 or more	3.67	3.54
45 - 54	11 or less	3.56	3.17
	12 or more	4.00	2.82
55 or over	11 or less	3.64	2.50
	12 or more	3.33	2.60

Total Variance = 2.78

Between Column Variance = 1.10

F = 11.07 Significant at the .01 level.

Between Row Variance = .99

F = 1.42 Not significant at the .05 level.

Residual (C X R) = .69

The attitude item eliciting the fewest number of favourable responses was that pertaining to the individual's perceived need for further education in order to ensure satisfactory employment in the future. Some 42.1 per cent of the participants in adult education as against 21.4 per cent of the non-participants agreed with the item and the difference between the two percentages was statistically significant. With one exception, every age and education block of participants expressed more favourable attitudes toward the item than the matched sample of non-participants. (Table 19). In the two younger age

TABLE 19
MEAN SCORES OF THE MATCHED SAMPLE OF PARTICIPANTS AND
NON-PARTICIPANTS IN ADULT EDUCATION: NEED FOR FURTHER
EDUCATION TO ENSURE ADEQUATE EMPLOYMENT

Age	Years of Schooling	Participants	Non-Participants
34 or less	11 or less	3.26	2.95
	12 or more	2.85	2.57
35 - 44	11 or less	2.92	2.84
	12 or more	2.83	2.15
45 - 54	11 or less	2.83	2.50
	12 or more	3.45	2.18
55 or more	11 or less	2.18	2.20
	12 or more	2.66	1.80

Total Variance = 2.90

Between Column Variance = .90 $F = 10.31$ Significant at the .01 level.

Between Row Variance = 1.39 $F = 2.37$ Not significant at the .05 level.

Residual (C X R) = .61

categories of participants and in all age categories of non-participants, those with eleven or less years of schooling expressed greater needs for further education than did those with twelve or more years of school completed. In the two older groups of participants, those with more schooling indicated greater needs for more education than did those with less.

ATTITUDE TOWARD CHANGE SCALE

An attitude toward change scale was constructed using six of the eight items discussed previously.² The distributions of favourable responses given by the participants, the non-participants, and by the scale validation sample are presented in Table 20. The distribution of scores between the participants

TABLE 20
PERCENTAGE OF PARTICIPANTS, NON-PARTICIPANTS, AND VALIDATION
SAMPLE GIVING FAVOURABLE RESPONSES TO CHANGE SCALE ITEMS

Scale Items	Participants (N = 126)	Non- Participants (N = 126)	Validation Sample (N = 143)
1. I would not leave this area under any circumstances.	81.0	73.8	82.5
2. Learning a new routine would be very difficult for me.	89.7	65.9	70.0
3. I do not want any new job which involves more responsibility.	71.4	54.0	61.5
4. I would find it very difficult to go to school to learn new skills.	77.0	51.6	51.7
5. I would not mind leaving here in order to make a substantial advance in my occupation.	57.1	34.9	25.9
6. I have no desire to learn a new trade.	50.8	34.1	23.8
Participants vs. Validation Sample:	$\chi^2 = 40.61$, d.f. = 5, $p < .001$.		
Non-participants vs. Validation Sample:	$\chi^2 = 5.84$, d.f. = 5, $p < .05$.		
Participants vs. Non-Participants:	$\chi^2 = 25.28$, d.f. = 5, $p < .001$.		

2. For information respecting the method of scale construction see: Louis Guttman, "The Basis for Scalogram Analysis", Studies in Social Psychology in World War II: Measurement and Prediction, Vol. IV, New York: John Wiley and Sons, 1966, pp. 60-90. A coefficient of reproducibility of .9103 and a consistency coefficient of .5400 were obtained from a scalogram analysis. The scale validation sample consisted of the total number of respondents interviewed in the survey of West Kootenay in 1967. The six item scale derived from the analysis was used in areas that were surveyed later in 1967.

and the other two groups was significantly different, but the non-participants did not differ significantly from the validation sample which suggests that the non-participants had attitudes toward change similar to those found in the rural population in general. The participants in adult education had an average of 71.2 per cent favourable responses to the six items and their average score was 4.27 points. On the other hand, the non-participants reported an average of 52.4 per cent favourable responses with an average score of 3.14 points.

It would seem possible therefore to differentiate between participants and non-participants in continuing education programs using the six item attitude toward change scale. Those rural residents who are presently non-participants but receive higher scale scores would seem to be the group most amenable to future educational programs and their participation should be quite readily obtained as their attitudes toward change are not inconsistent with the values espoused by agencies offering such programs. Reaching the non-participants who are more resistant to change would seem to require a different approach as their values are dissimilar to those of educative agencies.

SUMMARY

Participants and non-participants in adult education appeared to have markedly different attitudes toward change although many of the differences observed were accounted for by the age and education factors. When those variables were controlled, however, participants were more willing than non-participants to give up their spare time to further their education and they also noted a greater need for more education in order to ensure satisfactory employment in the future. In order to secure wider participation of the rural population in continuing education programs, it would first seem necessary to encourage the development of favourable attitudes toward change.

CHAPTER FOUR

IMPLICATIONS FOR RURAL DEVELOPMENT

An educational program in conjunction with rural development will have no chance for success if it does not engage the participation of the group for which it was designed. It is important therefore that those who have the responsibility for planning, instructing, and administering such programs be aware of the factors related to adult participation in continuing education. At the present time there is little data available pertaining to this problem in the rural Canadian setting. The study reported here analyzed the characteristics of participants and non-participants in rural adult education in British Columbia and the findings have a number of implications for those concerned with continuing education in rural areas.

A number of socio-economic characteristics were found to differentiate between participants and non-participants in adult education. The participants were generally younger with a higher level of living and they were more active in the organizational life of their communities than were the non-participants. The 126 people who participated in adult education had more formal schooling, their wives had more years of school completed, their children were more likely to finish high school, and more of them had job training

than was the case among a random sample of non-participants. There were more participants in the rural non-farm category than among farmers and the participants worked in more prestigious occupations and had higher job earnings than those reported by the non-participants. These findings are not inconsistent with the general trends noted previously although more educational variables were studied here than is usually the case.

The findings noted above enable the identification of those who would be more or less likely to participate in continuing education programs and this alone would be useful to program planners. People possessing one or more of the characteristics associated with participation would be more easily involved in educational programs than would those possessing none of the differentiating characteristics.

In most cases differences between participants and non-participants with respect to socio-economic characteristics were accounted for by the variables age and education. When the influence of age and education was removed by selecting a matched sample of non-participants, only social participation and occupational prestige remained as significant variables. Those who were more active in community organizations and those who had occupations with higher prestige were more likely to participate in adult education than were those reporting less social participation and occupations with lower prestige, regardless of the individual's age and education. There was a consistency between this study and the one by Douglass and Moss cited previously in which none of the positional variables they considered influenced participation among people of higher educational achievement, and social skills alone among the psychological variables was related to participation.

The data presented in this study suggest that particular emphasis needs to be placed on communicating with the older and less educated rural residents as most of the differences in participation patterns observed in the random sample were related to variations in age and education. The existing structure of formal community organizations might be an effective means of reaching some rural people who participate in them but not in adult education. There still

remains a large group who participate neither in community organizations nor in adult education and these people would be more difficult to reach. An individual or small group method of education based on local needs might be effective in communicating with them.

The relationship between occupational prestige and participation in adult education when considered with the findings noted for other economic characteristics suggests that much of the participation in rural British Columbia was vocationally oriented. Adult education may be perceived by the participants as a means of improving their occupational status and the resultant participation tends to increase the gap between the economically advantaged and the deprived. Participation in adult education also seemed to be increasing the differential between the educationally advantaged and disadvantaged. If educational programs are to be effective in improving the lot of the disadvantaged in rural areas, new approaches and methods seem to be called for as the existing ones are not reaching those who are most in need of assistance.¹

The identification of socio-economic characteristics differentiating between participants and non-participants in adult education is descriptive of the present situation and indicative of areas of weakness but it does not explain why non-participants remain aloof from educational programs. There are intervening psychological factors entering into the relationship and a cluster of variables all dealing with attitudes toward change was investigated in this study. All but one of the eight change items used differentiated between participants and non-participants.

Participants in adult education were generally more favourable toward changes in the present job, the place of residence, and toward changes involving learning than were the non-participants. As was not unexpected, the age and education of the respondents was associated with their attitudes toward change and more favourable attitudes were expressed by the younger respondents and by those with more schooling. When those two variables were controlled, however, participants in adult education were more willing than

1. This problem was also noted in Verner and Newberry, *op. cit.*, p. 219.

non-participants to give up their spare time to further their education and more of the participants were aware of the need for further education in order to ensure satisfactory employment in the future.

The attitudes of rural residents toward change seem to be important in whether or not they seek out opportunities to engage in learning. In order to obtain wider involvement in continuing education programs on the part of those who presently do not participate, it would seem necessary to alter their attitudes toward change so that they would not be resistant to learning new activities or material. This in itself would require substantial educational programs of a nature that are not presently offered. In essence, such a program would consist of "learning how to learn" and would prepare rural residents for subsequent continuing education programs in such areas as basic education and job training.

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